



Department of Energy
2003 Mid-Course Review
John Hanger, President and CEO
Citizens for Pennsylvania's Future
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The Good Old Days

Pennsylvania electric industry prior to 1997:

Electric rates varied by as much as 100% within Pennsylvania.

Rates ranged from about 20% below to 50% above the national average.

Pennsylvania's average electricity rate about 15% above national average.

PECO Energy and Duquesne Light had residential electric rates of 14 cents and 12 cents per kwh respectively.

55% of generation was coal; 40% was nuclear.



The Good Old Days

Multi-billion dollar nuclear plants placed in rates over consumer opposition

Little or no utility spending on conservation

Little or no utility support for renewable energy

Rolling blackouts January 19, 1994 when coal piles froze and some nukes tripped off in minus 20 degree weather



Dirty Power is the Problem

Dirty Power contributes to

Acid Rain

Smog

Global Warming

Toxic Pollution

Public Health Damage



Environment and Public Health

- Electric industry 2% of GNP.
- Electric industry responsible for 70% of sulfur dioxide, 40% of carbon dioxide, 30% of nitrogen oxide, 18% of mercury pollution, and a huge amount of particulate matter.
- One million Pennsylvanians suffer from respiratory illnesses caused or aggravated by air pollution.
- 6,000 miles of streams in Pennsylvania too acidic to support trout.
- Pennsylvania responsible for 1% of global warming emissions.



Electricity Facts

Energy resources used to produce electricity in PJM, 1/1/02 - 12/31/02

Coal	48.0086%
Oil	3.2129%
Natural Gas	10.9187%
Nuclear	35.9645%
*Captured Methane	0.0435%
*Geothermal	0.0000%
*Solar Voltaic	0.0000%
*Solar Thermal	0.0000%
*Solid Waste	0.8471%
*Water	0.8284%
*Wind	0.0144%
*Wood	0.1619%
<i>*Renewable Energy Resources subtotal = 1.8953%</i>	



Environment and Universal Service

- Budgets for low-income assistance programs have nearly quadrupled from pre-competition levels.
- Budgets for energy conservation targeted at low-income families have quadrupled.
- Renewable energy and cleaner energy products are available. See www.cleanyourair.org.
- Pennsylvania has four operating wind farms totaling 34.5 MW, and almost 300 MW (8 projects) are in various stages of development.
- Four Sustainable Development Funds have been formed with \$75 million of funding to support clean energy initiatives.
- Dominating the new generation market is gas-fired generation. It is nearly twice as fuel efficient and 99% cleaner on NOx and SOx emissions than many old coal-burning plants.



Wind Power in Pennsylvania

Wind farms currently in operation in Pennsylvania:

PA Humboldt Industrial Park

Hazleton, Luzerne County, online December, 1999
The Mid-Atlantic Region's first commercial wind turbines
.13 megawatts (MW), operated by Energy Unlimited
Power Purchaser/Marketer: Community Energy, Inc.

Green Mountain Garrett Wind Farm

Garrett, Somerset County
10.4 MW (2,500 households), developed by National Wind Power, owned and operated by FPL Energy
Power Purchaser/Marketer: Green Mountain Energy Company

Mill Run Wind Project

Springfield and Stewart Townships, Fayette County about 40 miles southeast of Pittsburgh
15 MW (5,700 homes)
Developer: Atlantic Renewable Energy Corporation and Zilkha Renewable Energy
Power Purchaser: Exelon Power Team/Marketer: Community Energy, Inc.

Somerset Wind Farm

Somerset Township, Somerset County, online October, 2001
9 MW (2,500 households)
Developer: Atlantic Renewable Energy and Zilkha Renewable Energy
Power Purchaser: Exelon Power Team/Marketer: Community Energy



Wind Power in Pennsylvania

Planned wind farms in Pennsylvania for 2003-2004:

Pocono Wind Farm - Near Waymart, Wayne County

61.5 MW (20,000 households)

Developer: National Wind Power/Orion Energy

Power Purchaser: Exelon Power Team/Marketer: Community Energy, Inc.

Meyersdale Wind Farm - Summit Township, Somerset County

Proposed for 30 MW

Developer: Atlantic Renewable Energy Corporation, Zilkha Renewable Energy

Keystone Wind - Somerset, Somerset County

Proposed for 25 MW

Developer: Disgen

Mountain High - Bear Creek Township, Luzerne County

Proposed for 26 MW

Developer: Energy Unlimited

Bear Creek - Bear Creek Township, Luzerne County

Proposed for 46.5 MW

Developer: Global Winds Harvest

Stony Creek - Stony Creek Township, Somerset County

Proposed for 54 MW

Developer: Generation Resource Holdings

Forward - Shade Township, Somerset County

Proposed for 36 MW

Developer: Generation Resource Holdings

Brothers Valley - Garrett, Somerset County

Proposed for 15 MW

Developer: US Windforce



Reliability

- 8,000 megawatts of new capacity built in PJM between 2001 and 2003.
- Record peak demands met in summer of 1999, 2001 and 2002
- Forced outage rate of power plants reduced by 50% since 1996.
- Reduced forced outage rate equivalent to building about 1,500 megawatts of new capacity.
- Expansion of PJM has increased number of power plants and geographic scope of market, allowing a reduction in the required reserve margin from 18% to 15%.
- PJM reports generation capacity will exceed reserve until at least 2007.
- \$760 million in transmission upgrades made over last six years.



Prices

	1996 Residential G&T Prices (cents)	1996 Residential G&T Prices in Constant Dollars (cents)
DQE	8.75	9.90
PECO	8.65	9.80
PPL	6.26	7.10
GPU/MetEd	5.70	6.40
GPU/Penelec	5.40	6.10
Allegheny	5.30	6.00

PECO total residential rate was 14.2 cents per kilowatt hour in 1996 or 16.0 cents in 2003 constant dollars.



Prices

	2003 G&T Prices for Residential
ECAP	5.87¢
ECAP 100%	7.18¢
electricAmerica	5.79¢
Green Mountain 50%	6.89¢ + \$3.95 monthly fee
Green Mountain 100%	7.56¢ + \$3.95 monthly fee
Community Energy 100% wind	8.43¢

*Stranded cost charges are added to competitive prices and conceal BARGAIN levels of wholesale and retail market prices.



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Wholesale Market Prices

- PJM wholesale spot market prices have averaged about 3.2¢ per kilowatt hour since January 1, 1999.
- The one-year forward contract within PJM has ranged from about 2.8¢ per kilowatt hour to 5¢ per kilowatt hour since 1999.



Competitive Market

- 2,755.80 megawatts of load have switched to competitive suppliers:
 - 312,862 customers have switched
 - 323,225 residential customers have switched
 - 79,745 commercial customers have switched
 - 892 industrial customers have switched
 - 25.8% of Duquesne's residential customers are served by competitive suppliers
 - 6.6% of PECO's residential customers are served by competitive suppliers
- Commercial and industrial load served by competitive suppliers increased by 58% in 2002.
- For most residential customers, without stranded costs, competitive rates are from 0.50¢ to 4.0¢ below historic monopoly rates.



Consumers

- Consumer savings totaled \$4 billion by 2001 from rate cuts and shopping savings.
- Most consumers received from a 2% to 8% one-year rate cut.
- PECO customers receive rate cuts from 1999 to 2005.
- Total rates are capped at January 1, 1997 levels until at least 2005 in many cases.
- Generation rates are capped at set levels until 2010 in most service territories.
- Basic residential rates dropped approximately 20% in early 2002 when stranded cost charges were eliminated in Duquesne Light territory, a level not seen since 1981.
- Residential heating rates dropped 39% in Feb. 2003 when stranded cost charges eliminated, saving average customer \$444 per year.



Reforms Needed

- Promote demand response through deployment of time-of-use meters in all premises over a reasonable period;
- Adopt policies facilitating customer aggregation through municipalities;
- Replace capacity markets with a policy requiring PJM or distribution company to perform annual review of generation adequacy over three-year period and, if and only if review identifies a supply shortage, to conduct an auction for new generation. All resources — distributed generation, demand resources and central stations — should be allowed to bid;
- Adopt a Renewable Portfolio Standard (RPS) requiring 10% of generation capacity to come from renewable resources by 2012. An RPS would:
 - diversify the fuel mix of generation
 - improve reliability
 - spur economic development in Pennsylvania
 - reduce pollution which causes smog, acid rain, habitat damage, global warming, illnesses and premature deaths